

ArgoNeuT Update

All Experimenter's Meeting

Mitch Soderberg

10/26/2009



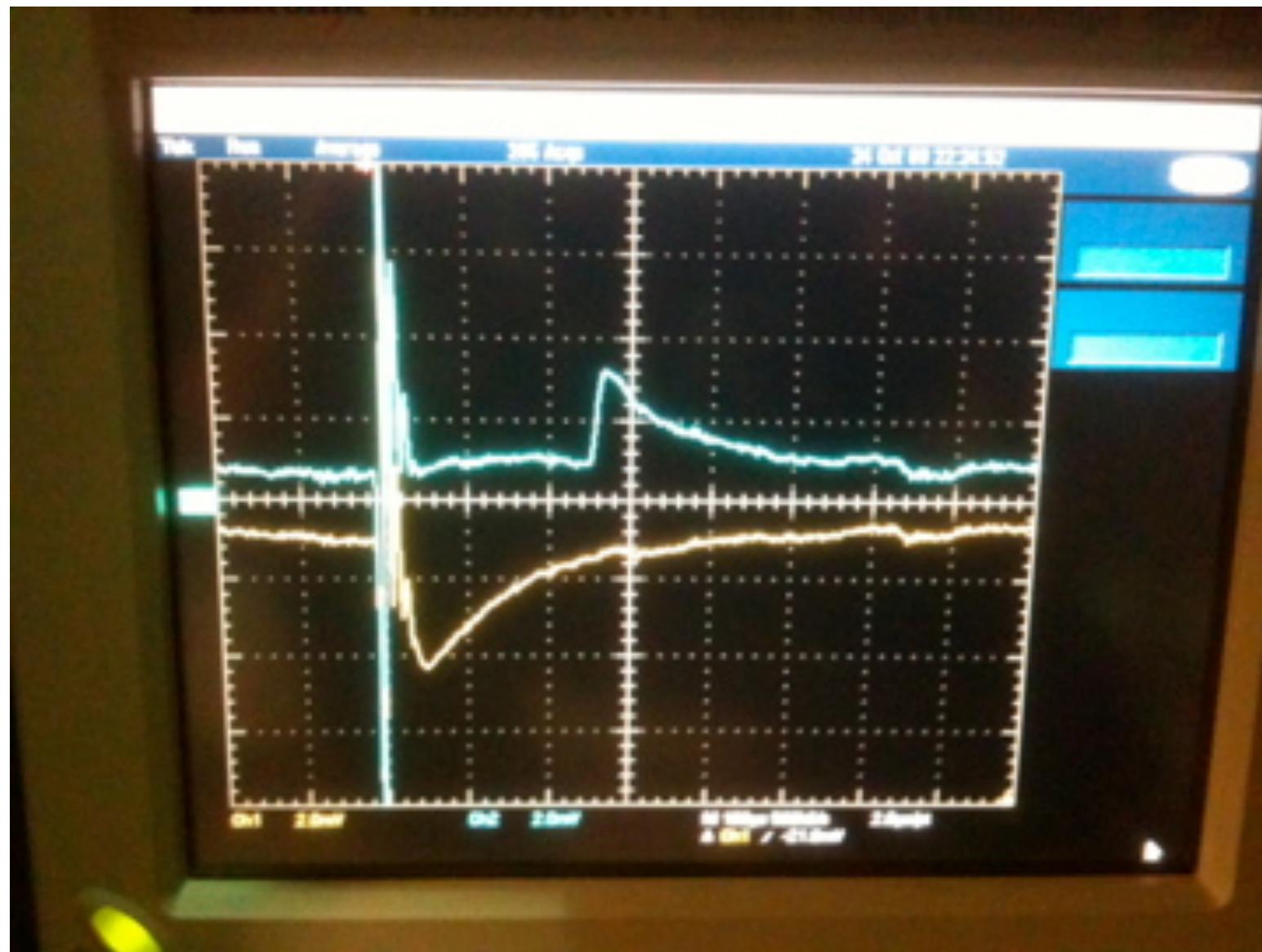
ArgoNeuT Cryogenic Issues

- We developed a problem with our cryogenic system the evening of Oct. 4, 2009.
- We had a sudden drop in cooling power of our cryocooler, which was confirmed after removing it from the system for testing.
- Using DECAM's cryocooler as a spare, we reinstalled it on Sat., Oct. 17.
- We've spent the past week readying the system for a refill
 - ▶ Vacuum pumping on inner cryostat down to $1.4\text{E-}4$ mbar, with several Argon gas purge cycles.
 - ▶ Installation of liquid fill line, including two TRIGON filters for purifying the Argon.
- We refilled the cryostat this past Sat., Oct. 24th.
 - ▶ Filling took around 12 hours once we got started.
 - ▶ Used 10 dewars, for a total liquid weight of $\sim 1500\text{lbs}$.



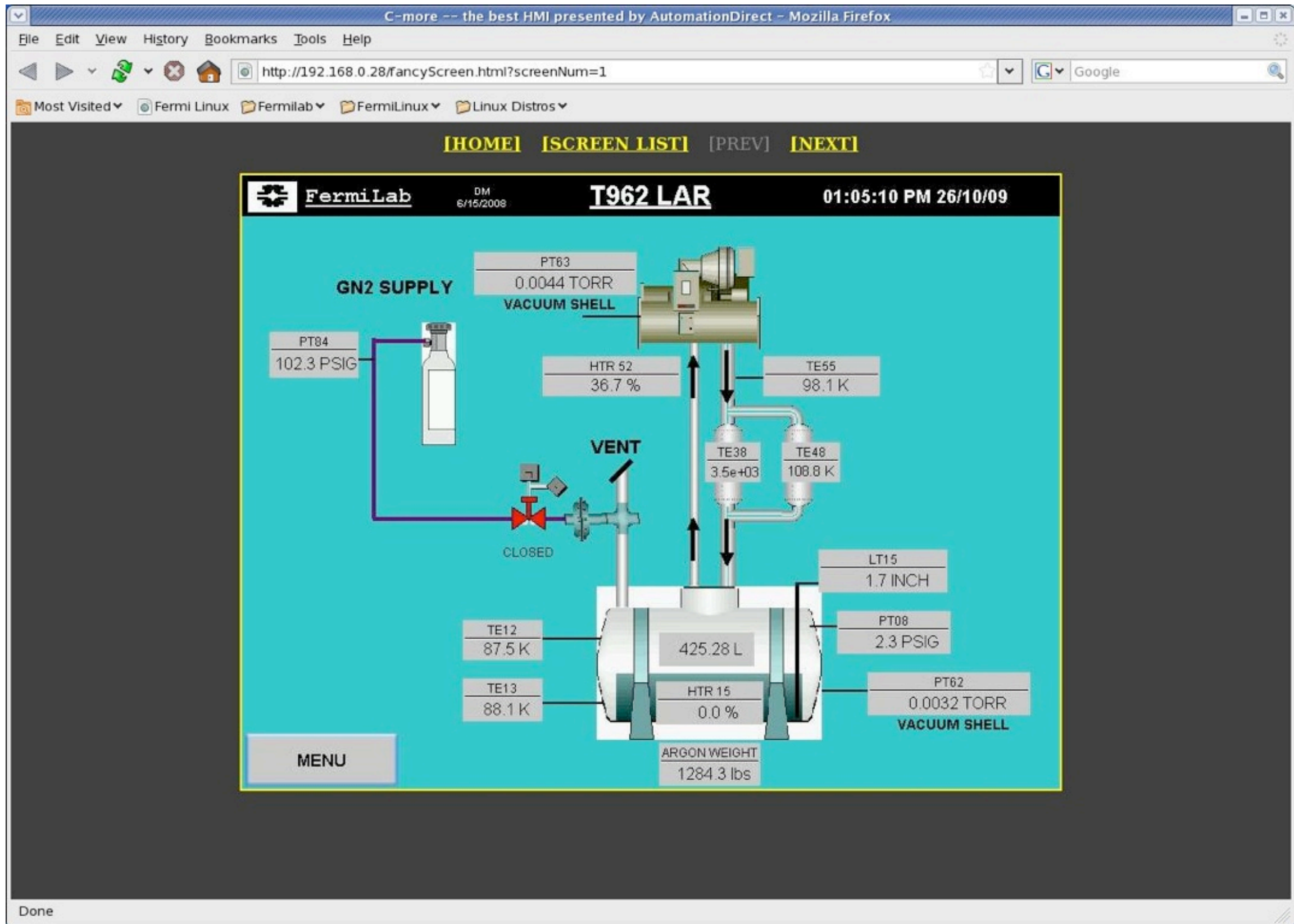
Argon Purity

- Argon purity is very good already, which is much better than our last fill.
- Lifetime is $400\mu s$ (last time around the lifetime was $<10\mu s$, and it took a month of recirculating to achieve good purity).

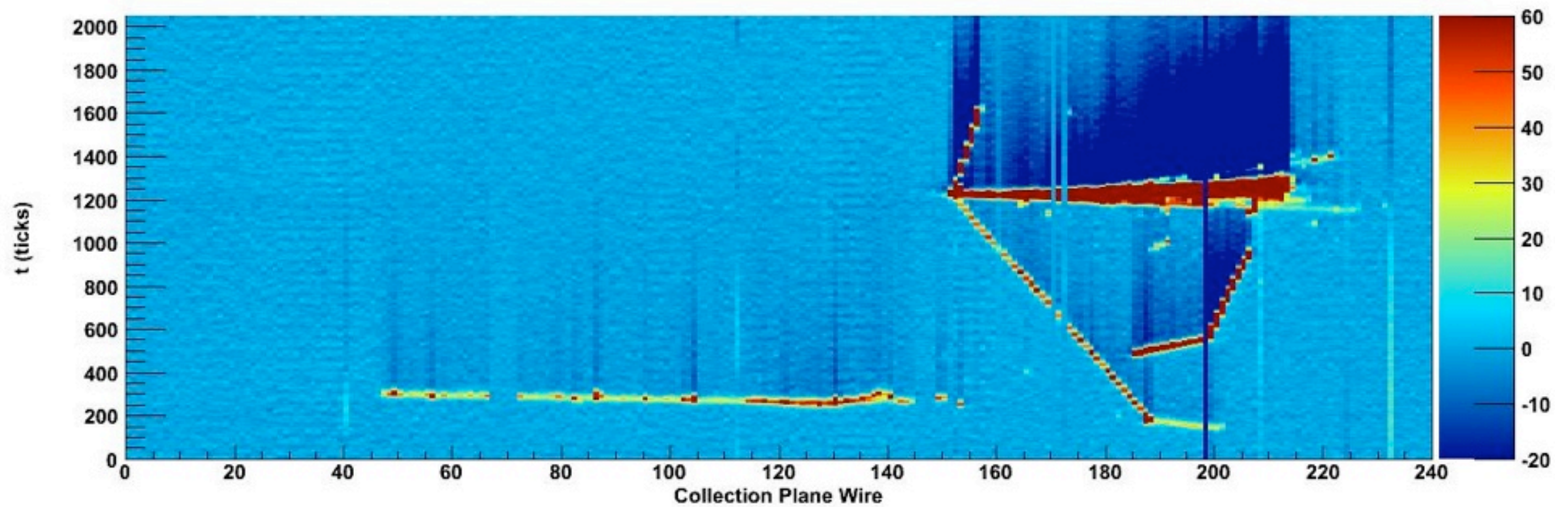
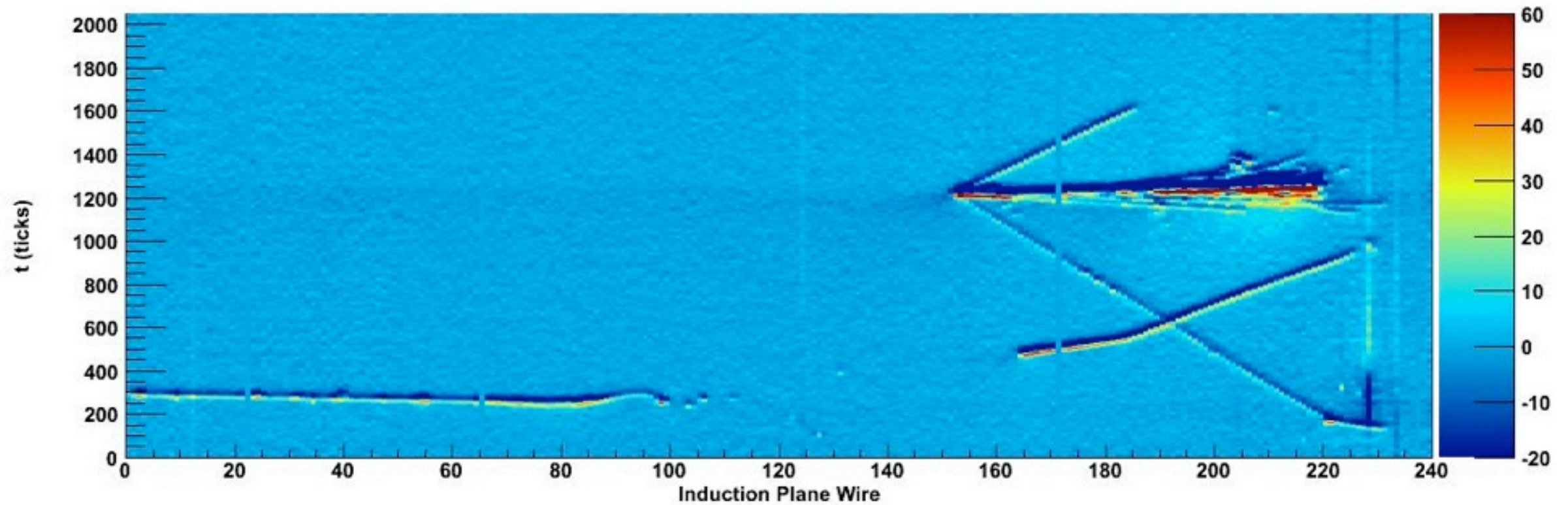


Purity Monitor signal

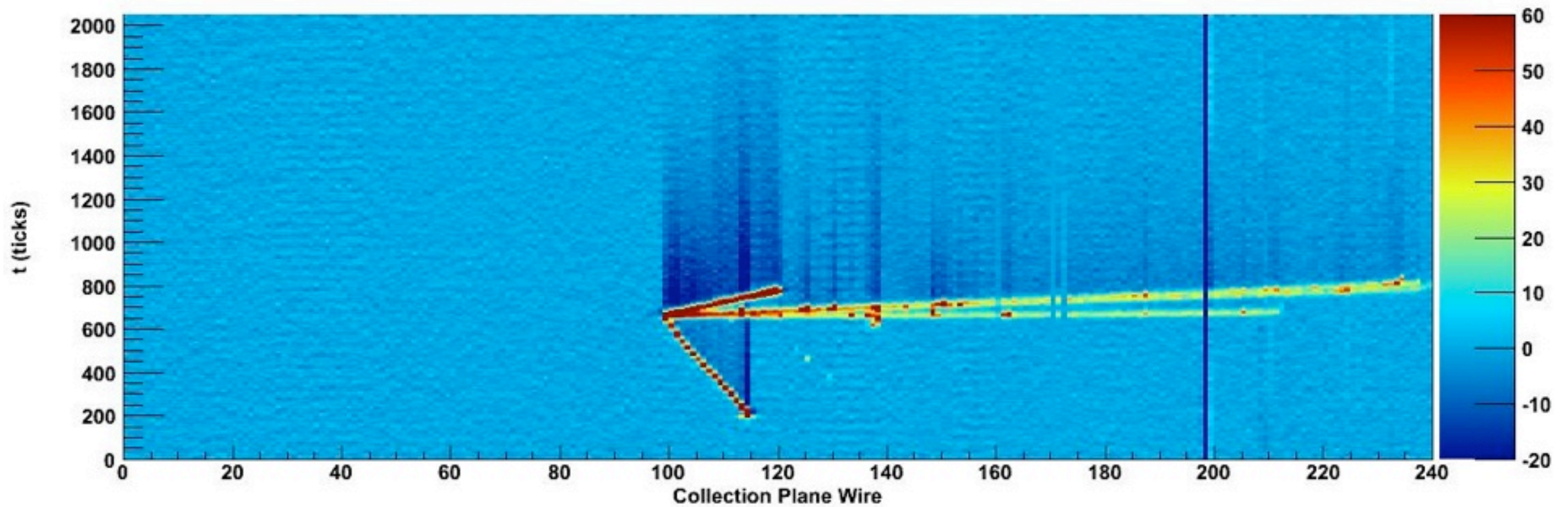
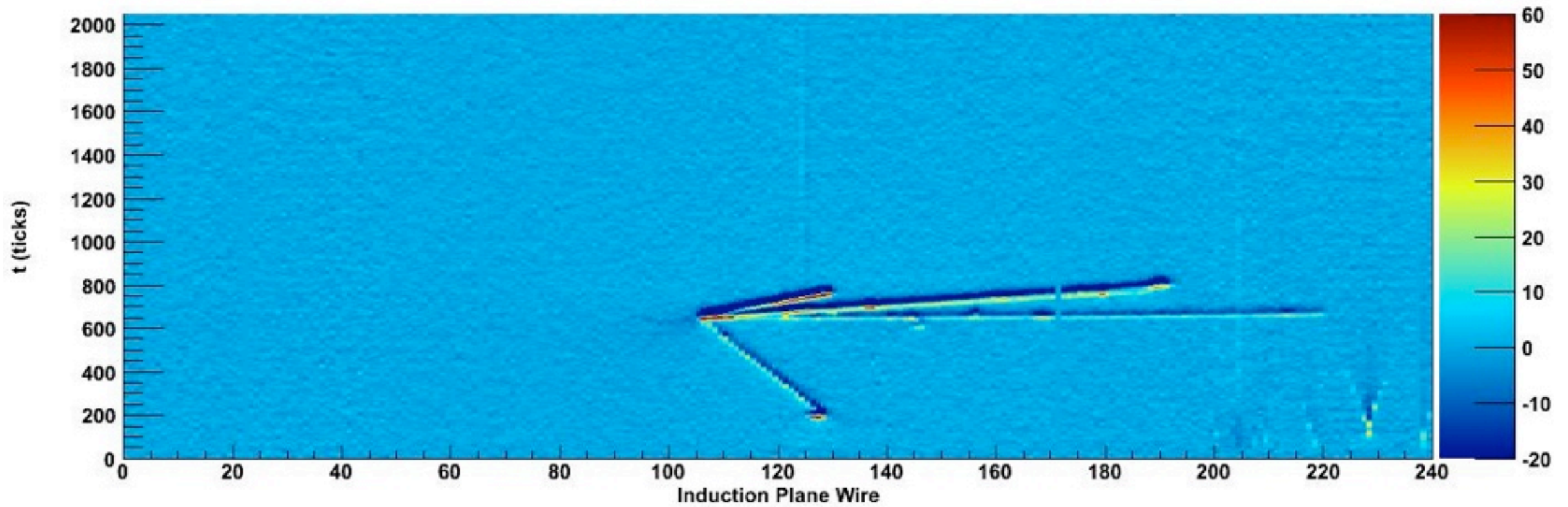
Process Control Display



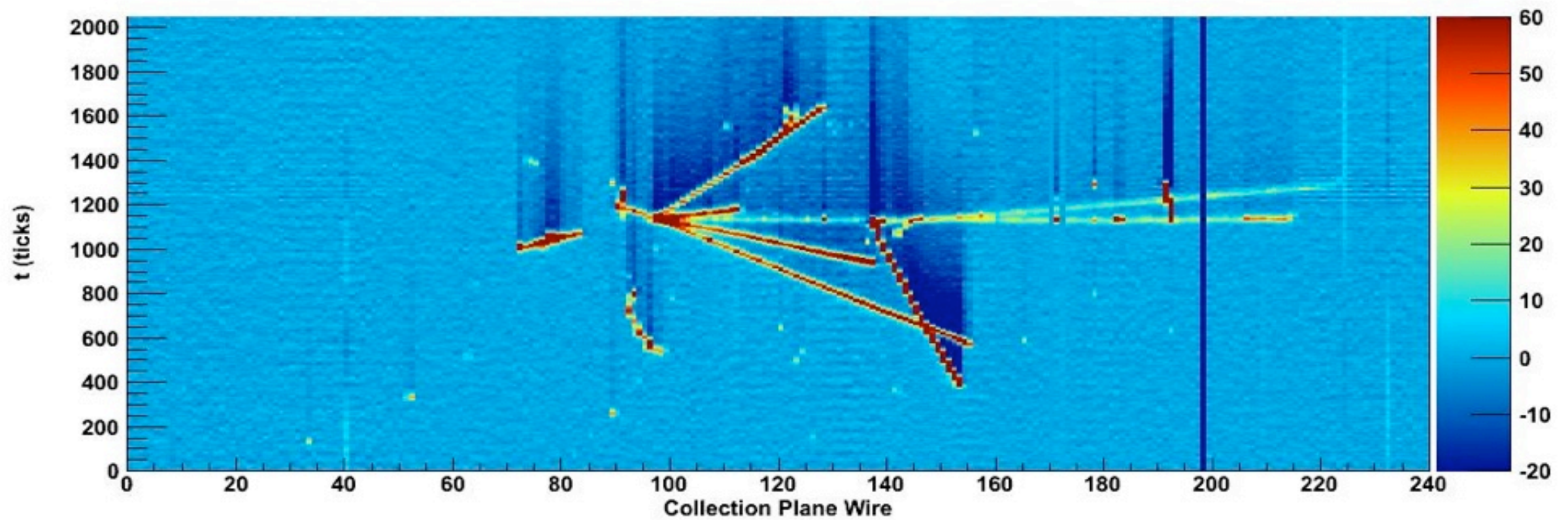
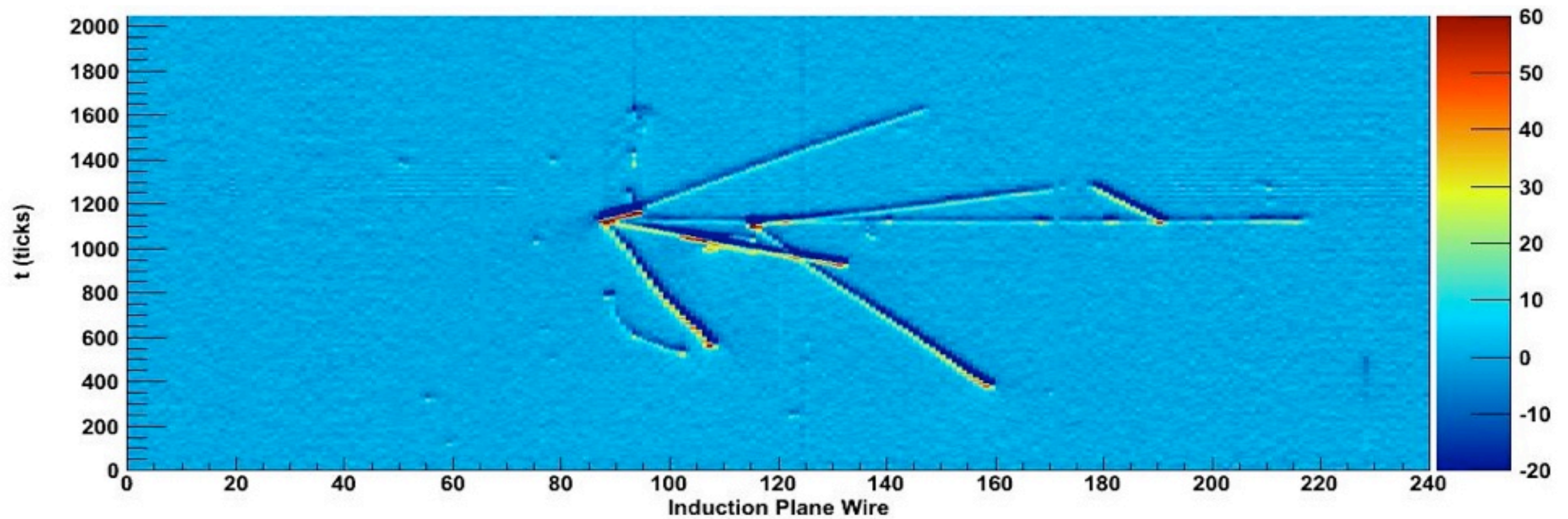
Events



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Outlook

- We are once again in normal running mode...plan to stay that way until the end of our run early next year.
- Still have plenty to keep us busy (filter exchanges, data management, analysis, etc...).

**Thanks to all who helped us during the
past few weeks!**



Andrew Lathrop and Josh Spitz
hard at work on a Saturday